Five-Year Review Report

Second Five-Year Review Report
for
Bennett's Dump
Monroe County, Indiana
August 2007

PREPARED BY:

The United States Environmental Protection Agency
Region V
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Approved by: Date:

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List of Acronyms

ARARs	Applicable or Relevant and Appropriate Requirements
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CIC	Citizens Information Committee
COPA	Citizens Opposed to PCB Ash
CFR	Code of Federal Regulations
IDEM	Indiana Department of Environmental Management
NPL	National Priorities List
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
OSC	On-Scene Coordinator
PCBs	Polychlorinated biphenyls
ROD	Record of Decision
RD/RA	Remedial Design/Remedial Action
TAG	Technical Assistance Grant
U.S. EPA	United States Environmental Protection Agency

Executive Summary

The source control operable unit (operable unit one) remedy for the Bennett's Dump site in Monroe County, Indiana, included the removal of polychlorinated biphenyls (PCBs) contaminated soil to an approved landfill, off-site incineration of capacitors, backfilling of the excavated area with clean fill, placement of a 12-inch soil cover over the excavated area, a small sediment removal in Stout's Creek, and the finalization and implementation of institutional controls (ICs). The construction was completed in September 2000. Due to the continuing release of PCBs from the on-site springs, the first Five-Year Review was completed in August 2002. Based upon the recommendations from the first Five-Year Review, an investigation was completed in 2006, including completing human health and ecological risk assessments. A Record of Decision Amendment for operable unit two (groundwater) and operable unit three (sediment) was signed on September 26, 2006, to address the continuing release of PCBs from springs on-site.

The conclusion of this second Five-Year Review is that the remedy chosen by the September 26, 2006 ROD Amendment for operable unit two and operable unit three needs to be implemented. The source control operable unit remedy remains protective, but since the remedies for the groundwater and sediment operable units have not been implemented, the remedy as implemented is not protective of human health and the environment. The United States Environmental Protection Agency (U.S. EPA) expects the remedy to be protective once the operable units for groundwater and sediment are implemented and effective institutional controls are implemented, monitored and maintained.

FIVE-YEAR REVIEW SUMMARY FORM

Site name (from WasteLan): Bennett's Dump		
U.S. EPA ID (from WasteLan): IND006418651		
Region: 5	**State:** IN	**City/County:** Bloomington/Monroe
NPL status: Final		
Remediation status: Construction pursuant to ROD Amendment for contaminated water and sediment not completed		
Multiple OU's: Yes	**Construction completion date:** September 25, 2000 for OU 1; OU2 and 3 not completed	
Has site been put into reuse: No		
Lead Agency: U.S. EPA		
Author name: Thomas Alcamo		
Author title: Remedial Project Manager	**Author affiliation:** U.S. EPA Region 5	
Review period: 01/02/07 to 07/01/07		
Date(s) of site inspection: August 7, 2007		
Type of Review: Pre-SARA		
Review number: second		
Triggering action: Previous Five-Year Review Report		
Triggering action date (from Wastelan): 8/22/2002		
Due date (five years after triggering date): 8/22/2007		

FIVE-YEAR REVIEW SUMMARY FORM, cont'd.

Issues:

- Continuing release of PCBs from the on-site springs into Stout's Creek.
- The required institutional controls have not been implemented. Implementing and maintaining ICs will be required to assure protectiveness of the remedy.

Recommendations and Follow-up Actions:

- Implement the September 29, 2006 ROD Amendment.
- Finalize Institutional Controls within 6 months after completion of construction.

Protectiveness Statement(s):

The source control operable unit remedy remains protective, but since the remedies for the groundwater and sediment operable units have not been implemented, the remedy is not protective of human health and the environment. U.S. EPA expects the remedy to be protective once the operable units for groundwater and sediment are implemented and effective institutional controls are implemented, maintained and monitored.

Other Comments:

Date of last Regional review of Human Exposure Indicator (from WasteLAN): January 5, 2007

Human Exposure Survey Status (from WasteLAN): Current human exposure not controlled, some exposure control achieved.

Date of last Regional review of Groundwater Migration Indicator (from WasteLAN): March 12, 2007

Groundwater Migration Survey Status (from WasteLAN): Contaminated groundwater migration not under control.

Ready for Reuse Determination Status (from WasteLAN): Not ready for reuse.

Bennett's Dump Superfund Site
Monroe County
First Five-Year Review Report

I. Introduction

The purpose of the Five-Year Review is to determine whether the remedy at a site is protective of human health and the environment. The methods, findings and conclusions of reviews are documented in Five-Year Review reports. In addition, Five-Year Review reports identify issues found during the review, if any, and makes recommendations to address them.

The Agency is preparing this Five-Year Review pursuant to CERCLA Section 121 and the National Contingency Plan (NCP). CERCLA Section 121 states:

> *If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action* ***no less often*** *than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section 104 or 106, the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.*

The Agency interpreted this requirement further in the NCP, 40 CFR Section 300.430(f)(4)(ii) which states:

> *If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such actions no less often than every five years after the initiation of the selected remedial action.*

The United States Environmental Protection Agency (U.S. EPA), Region V conducted this policy Five-Year Review of the remedial actions implemented at the Bennett's Dump site in Monroe County, Indiana. This report documents the results of the review. The Indiana Department of Environmental Management (IDEM) and Monroe County Health Department provided support in the development of this Five-Year Review.

This is the second Five-Year Review for the Bennett's Dump site. Construction was completed at the Bennett's Dump site on September 25, 2000. The site soils excavation was completed in the fall of 1999 and a small sediment removal in Stout's Creek was subsequently completed in September 2000. The first Five-Year Review was completed on August 22, 2002. The first Five-Year Review recommended additional investigation of the groundwater due to the

continuing release of PCBs from on-site springs into Stout's Creek. The investigation determined that additional operable units for water and sediment were required and a Record of Decision (ROD) Amendment for groundwater and sediment operable units was signed on September 26, 2006.

II. Site Chronology

Table 1 - Chronology of Site Events

Event	Date
Bennett's Stone Quarry used as a landfill for Westinghouse electrical capacitors.	1960's
Initial site inspection by U.S. EPA.	May 12, 1983
First interim remedial measures consisting of removal off-site of visible capacitors and stained soils with placement of clay cover over site.	June 1983
Consent Decree signed for the incineration of PCB contaminated material at six sites in or near Bloomington, Indiana (Bennett's Dump one of six).	August 22, 1985
Second interim remedial measures consisting of additional capping of the site, posting of warning signs and sediment removal in Stouts Creek.	September 1988
State of Indiana passes law forbidding the review of the incinerator permit, preventing implementation of incineration remedy.	1991
The Consent Decree parties (Westinghouse, U.S. EPA, State of Indiana, Monroe County, and City of Bloomington) agree to explore other remedies for the six Consent Decree sites through the operating principals.	February 4, 1994
Due to a lack of progress on developing new remedies, Federal Judge S. Hugh Dillin issues judicial order stating that all source control for the six sites must be completed by December 31, 1999. Assigns Special Master (Magistrate Judge Kennard Foster) to oversee progress.	November 1997
ROD Amendment signed for the cleanup of the Bennett's Dump site. Site remediated to low occupancy/industrial standards for PCBs with soil removed to off-site landfill and capacitors incinerated off-site.	October 16, 1998
Consent Decree parties make progress in negotiations for the cleanup of the six sites and Federal Judge S. Hugh Dillin agrees to extend deadline to December 31, 2000.	February 1999
Approval of Remedial Design/Remedial Action Work Plan for the source control operable unit.	August 1999
Construction begins for the source control operable unit cleanup of Bennett's Dump (excluding sediment cleanup in Stout's Creek).	August 1999
Approval of Remedial Design/Remedial Action Work Plan for sediment cleanup in Stout's Creek.	September 2000
Preliminary Close-Out Report signed.	September 25, 2000

Event	Date
Long-Term Groundwater Monitoring Plan approved.	April 22, 2002
Groundwater Investigation Plan approved for groundwater and sediment operable units.	April 22, 2002
First Five-Year Review signed.	August 22, 2002
ROD Amendment for groundwater and sediment operable units signed.	September 26, 2006

III. Background

Physical Characteristics

Bennett's Dump is located approximately 2.5 miles northwest of Bloomington, Indiana in Monroe County. See Figure 1. The site is located in a former limestone quarrying area previously known as Bennett's Quarry. Stout's Creek is on the west border of the site with quarry access roads to the south and east. Surrounding the site are several abandoned quarry pits filled with water and large limestone blocks and rubble. The site is surrounded by a new development called the North Park Development. Residential and commercial construction is underway surrounding the site.

The main area of the Bennett's Dump site is 3.5 acres in size and another smaller area, referred to as the satellite area, is located approximately one hundred feet to the east of the main area. The satellite area is approximately a half-acre in size.

Land and Resource Use

The land in the vicinity of Bennett's Dump was previously used for quarrying operations. Bennett's Quarry was privately owned and operated by Edwin Bennett until it was sold to the Star Stone Company in 1987. The Bennett's Dump site lies within the Star Stone Company property. The Bennett's Stone Quarry is inactive. When the quarry was active it produced finished building stone and crushed stone. The inactive stone mill is located within 50 feet of the southwest corner of the main site. The North Park Development Group has a development agreement with Star Stone to develop the Star Stone property and the North Park Development Group is acting on behalf of Star Stone for any environmental issues.

The current land use for the surrounding area is a mix of commercial and residential properties. The North Park Development group has started constructing both residential and commercial properties and this will continue over the next 10 years. Figure 2 is a proposed overview of the North Park Development. The main and satellite areas of the Bennett's Quarry site were fenced prior to remediation, but since the completion of the cleanup at those locations, the fence has been removed. The Star Stone Company continues to prevent access to its property and the Bennett's Dump site through the use of a gate on the main access road but this will change as the

North Park Development progresses.

The groundwater aquifer underlying the site is currently not used as a drinking water source. Springs located on the Bennett's Dump site, however, result in groundwater flowing into Stout's Creek. Fishing occurs about 3.5 miles downstream from the Bennett's Dump site.

History of Contamination

During the 1960's, a portion of the Bennett's Quarry was used as an uncontrolled dump for electrical parts and capacitors containing PCB dielectric fluid. The capacitors came from the former Westinghouse Electric Corporation (now known as CBS Corporation) capacitor manufacturing plant in Bloomington, Indiana. Monroe County first discovered the site and the U.S. EPA did an initial inspection on May 12, 1983. The initial condition of this site indicated that most of the electrical parts visible at the site had been crushed, burned, or otherwise torn open with insulator wrapping paper, ceramic bushings, and other electrical parts scattered about the surface. Stained soil was also evident on the surface of the dump.

Initial Response

The Bennett's Dump site was first discovered by the Monroe County Health Department in 1983. The Monroe County Health Department requested a site assessment by the U.S. EPA in May 1983. Sampling showed that PCBs were found in large concentrations across the site and based upon the sampling data, an interim remedial measure was initiated by the U.S. EPA in June 1983. The interim remedial measures included the following:

- Installation of a locked, 8-foot high chain link barbed wire security fence surrounding the three contaminated areas.

- A total of 252 visible capacitors were removed for off-site incineration and 20 cubic yards of stained soil were excavated and disposed of in an approved off-site landfill.

- A 16 to 22 inch clay cap and 6 inches of topsoil cover were installed over the main site.

The Bennett's Dump site was placed on the National Priorities List in September 21, 1984, and was one of the six sites included in the Consent Decree that was entered with the court on August 22, 1985. The Consent Decree called for the construction of a permitted, TSCA-approved, dedicated, municipal solid waste-fired incinerator to be used to destroy PCB contaminated soils and materials excavated from the six sites.

Beginning in 1991, the Indiana State Legislature passed several laws intended to delay and block the implementation of the incinerator remedy required in the 1985 Consent Decree. In February

1994, the parties agreed to jointly explore, under the Operating Principles alternatives to the incineration remedy.

A second phase of interim measures began in 1987 pursuant to requirements in the August 1985 Consent Decree. The second phase included installing an additional cap area at the edge of the main site and posting warning signs. Also, in September 1988, CBS removed sediments along 1,800 feet of Stout's Creek. The contaminated sediment was transported to the Interim Storage Facility (ISF) at the Winston Thomas site for storage. The contaminated sediments from Stout's Creek and PCB contaminated material from other interim measures at the other Consent Decree sites that were being stored at the ISF were subsequently removed to an approved off-site landfill in February 1998 pursuant to a time critical removal action.

Basis for Taking Action

At the Bennett's Dump site, PCBs are the main contaminant of concern. PCBs have been discovered in soil, sediment and in groundwater. Due to the karst geology, groundwater discharges through a series of springs located on-site and is released to an adjacent creek named Stout's Creek, where PCBs have also been discovered.

Prior to remediation, soils on the Bennett's Dump site presented a significant risk to human health and the environment. Groundwater which emerges from a series of springs on the Bennett's Dump site continues to show PCBs even after the completion of the operable unit one remediation in 2000. The risk assessment for operable units two and three show that unacceptable risk to human health and the environment exists based upon PCB concentrations found in fish from Stout's Creek.

IV. Remedial Actions

Remedy Selection

Based upon the Operating Principles that were agreed to in February 1994 and the court order requiring completion of source control remedy by December 31, 2000, the U.S. EPA on August 21, 1998, made available to the public the proposed plan for the Bennett's Dump site. The governmental parties concurred on the proposed Record of Decision (ROD) Amendment.

The ROD Amendment for the source control (operable unit one) at the Bennett's Dump site was signed by U.S. EPA on October 16, 1998. The objective of the cleanup was to remediate the site to low occupancy/industrial standards for possible reuse. Based upon groundwater monitoring data prior to remediation, the expectation was that the large source removal would reduce and subsequently eliminate the discharge of PCBs from the springs on the Bennett's Dump site. But, the release of PCBs into Stout's Creek since the interim sediment cleanup in 1988 indicated that additional sediment cleanup was required in Stout's Creek.

The major components of the operable unit one remedy selected in the October 1998 ROD Amendment include the following:

- Excavation and off-site disposal in a permitted, commercial chemical waste/Toxic Substances Control Act landfill of approximately 55,000 cubic yards of contaminated soils containing PCBs in excess of 25 parts per million (ppm) on average.

- Excavation and off-site incineration in a permitted, commercial incinerator of PCB containing capacitors.

- Long-term groundwater monitoring and implementation of deed restrictions.

The construction of the operable unit one remedy was completed on September 25, 2000. After completion of construction, U.S. EPA learned that PCBs continued to be released into Stout's Creek from springs on the Bennett's Dump site. U.S. EPA completed the first Five-Year Review on August 22, 2002, which determined that an additional investigation was required to determine if the continuing release of PCBs was a threat to human health and the environment. After completion of the investigation, a ROD Amendment for two new operable units, operable unit two for groundwater and operable unit three for sediment, was signed on September 26, 2006. The major components of the September 2006 ROD Amendment include the following:

- Install a passive quarry drain system to reduce the flow from springs and groundwater. The passive quarry drain will drain the Wedge Quarry Complex to reduce the groundwater elevation and thereby reduce groundwater flow from the springs. Icebox Quarry may also be drained into the Wedge Quarry Complex. Treatment of water from Icebox Quarry may be required since sampling has shown PCBs at 0.1 ppb PCBs.

- Install a groundwater interceptor trench to capture groundwater and treat the PCB contaminated water prior to discharge to Stout's Creek. The discharge will meet the National Pollution Discharge Elimination System (NPDES) substantive requirements. The conceptual design of the interceptor trench would be to locate the trench along the east side of Stout's Creek and be approximately 800-feet long and 8 feet deep. The trench would collect all discharges from the springs at the site, as well as collect contaminated groundwater that may be emerging from springs in and along Stout's Creek Groundwater is assumed to flow at a maximum of 100 gallons per minute during storm events. A pre-design study on the groundwater will be required after the installation of the passive quarry drain to determine the final design parameters of the interceptor trench and treatment system.

- An Operations and Maintenance Plan will be developed for the collection and treatment system and a monitoring program to monitor the effectiveness of the remedy.

- Development of institutional controls to prevent residential development and any deep excavation in the former quarry pits. Additional institutional controls will limit access and fishing in Icebox Quarry and placement of any drinking water wells on the site. Access will

be prevented through fencing for springs on-site and the interceptor trench and treatment system.

Remedy Implementation

In the August 1985 Consent Decree, CBS Corporation agreed to build a municipal waste fired incinerator dedicated for the destruction of PCB contaminated material from six sites located in the Bloomington, Indiana area. It was estimated that 55,000 cubic yards of PCB contaminated material was located at the Bennett's Dump site and was to be treated by the municipal waste fired incinerator. Public opposition to the incinerator arose before and after entry of the Consent Decree. Applications for the necessary permits to design and build the incinerator were submitted by CBS in 1991. Beginning in 1991, the Indiana State Legislature passed several laws intended to delay and block the implementation of the incineration remedy required in the 1985 Consent Decree. The incinerator was never built. Instead, in February 1994, the parties agreed to jointly explore under the Operating Principles alternatives to the incineration remedy for the six sites.

Due to a lack of progress in developing new site remedies, in November 1997, Federal Judge S. Hugh Dillin issued a judicial order stating that the six Consent Decree sites must be remediated by December 1999. Judge Dillin also assigned Magistrate Judge Kennard Foster to oversee the progress of the parties toward meeting the December 1999 deadline. On February 1, 1999, Judge Dillin issued another Judicial Order approving and adopting Report and Recommendations of Magistrate Judge and Special Master Kennard Foster which extended the deadline for completion of the source control at the six sites by December 31, 2000. The source control remedies were completed by the December 31, 2000, deadline and CBS and the governmental parties are in the process of negotiating a global settlement[1] for all the remaining issues for the six Consent Decree sites.

The Remedial Design/Remedial Action (RD/RA) Work Plan for the Bennett's Dump source control operable unit which contained the design of the cleanup was approved on August 9, 1999. Construction began in mid-August and the first phase of the cleanup was completed in November 1999. The project involved the following:

- Shipping a total of 36,157 tons of PCB contaminated material greater than or equal to 50 ppm to Environmental Quality Company's Wayne Disposal Landfill.

- Shipping a total of 1,756 capacitors weighing 118.72 tons to Onyx Environmental in Port

[1] The global settlement will include both technical and non-technical issues. Technical issues such as water remediation and sediment remediation remain to be addressed at Lemon Lane Landfill, Neal's Landfill and Bennett's Dump. Non-technical issues include the recovery of costs incurred by U.S. EPA and the governmental parties and compensation for natural resource damages.

Arthur, Texas for incineration.

- The site was backfilled with approximately 25,000 cubic yards of clean clay, graded for drainage and seeded for a minimum of 12 inches of clean cover.

The confirmation sampling showed that the arithmetic average of all the residual sample results was 11.3 ppm PCBs compared to the cleanup level of 25 ppm PCBs. At three locations, the excavation revealed deep quarry pits filled with rubble. The rubble consisted of large boulders and smaller, broken pieces of stone mixed with soil. At these locations, capacitor parts and PCB contaminated soils existed above the rubble. The capacitor parts and PCB contaminated soil were removed. During excavation, each of the excavations filled with groundwater that made contact with the rubble. The groundwater had a light sheen in some locations and one sample showed diesel fuel contaminated with PCBs. The water/oil mixture was pumped and treated to allow the excavations to proceed. The three areas may have been locations where capacitors were broken open and the PCB oil was drained onto the ground surface. Samples taken in the three areas at the bottom of the excavation revealed concentrations greater than the 50 ppm PCB maximum allowable limit. The governmental parties allowed the excavation to be terminated after removing as much material as possible due to the presence of groundwater and the depth of the excavation. The final sampling in the grids where the three areas were located showed residual PCB contamination of 33 ppm, 25.3 ppm and 162 ppm.

A second phase of the source control operable unit remedy included a small sediment and bank cleanup in Stout's creek that was completed in September 2000. A total of 10 cubic yards of sediment was removed so that residual levels were under 1 ppm PCBs.

The continuing release of PCBs from springs on the Bennett's Dump site into Stout's Creek required an additional investigation and a ROD Amendment for the groundwater and sediment operable units was signed on September 26, 2006. U.S. EPA, CBS Corporation, City of Bloomington, State of Indiana and Monroe County are negotiating a global settlement which includes the implementation of the operable unit 2 and 3 ROD Amendment.

Institutional Controls

Institutional controls (ICs) are non-engineered instruments, such as administrative and/or legal controls that help minimize the potential for exposure to contamination and protect the integrity of the remedy. Compliance with ICs is required to assure long-term protectiveness for any areas which do not allow for unlimited use or unrestricted exposure.

The Bennett's Dump site and surrounding area will require ICs. The final remedy is not completed but the following institutional controls may be required for the site and surrounding area as part of the final remedy:

- A portion of the site, including the satellite area shown on Figure 3 will require the

prohibition of any residential development through the use of an enforceable restrictive covenant.

- Dependent upon how effective the passive quarry drain is in reducing spring flow from Middle and Mound Springs, the on-site springs and the collection trench/water treatment plant will need to be fenced and such fencing will need to be maintained to prevent access.

- Restriction will be placed on Icebox Quarry as shown on Figure 3 to prevent fishing and swimming due to low levels of PCBs present in the water.

- Groundwater use on-site will be prohibited through the use of an enforceable restrictive covenant.

U.S. EPA is in negotiations with CBS Corporation and the other governmental parties on a global settlement for six sites, including Bennett's Dump. The enforcement mechanism will be determined during the negotiations with CBS. The required ICs have not been implemented. Implementing and maintaining ICs will be required to assure protectiveness of remedy. Submission of a workplan by the PRPs is required for implementation of effective ICs, including documentation of IC evaluation activities and planning for long-term Site stewardship to assure proper maintenance and monitoring effective ICs. IC evaluation activities and monitoring shall be done in accordance with current guidance. IC evaluation activities generally include performing title work to determine ownership and whether prior-in-time encumbrances may interfere with the ICs, preparation of maps, and proposing effective ICs. U.S. EPA expects to have the institutional controls finalized within 6 months after completion of the construction of the sediment and groundwater operable units. Depending upon the results of the pre-design investigation, construction should be completed in 2009.

Operation and Maintenance

Since the removal of the contaminated soil and capacitors from the site in November 1999, groundwater PCB-contamination levels at the site have not improved as expected. Four springs at the Bennett's Dump site; Middle Spring, Mound Spring, Mid North Spring and North Spring, have continued to release PCBs into Stout's Creek. See Figure 3. Observations and measurements indicate that Middle Spring flows continuously, except during very dry periods and Mound Spring, Mid-North, and North Spring flow intermittently, largely based upon the season. All four springs have shown PCB contamination. In addition, groundwater monitoring wells have also shown PCB contamination. Based upon the recommendations from the first Five-Year Review, an investigation, including human health and ecological risk assessments for groundwater and sediment was completed to determine if the releases were a threat to human health and the environment. Based upon the results of the investigation, a ROD Amendment for operable units 2 and 3 to address the groundwater and sediment was signed on September 26, 2006.

Long term protectiveness at the site requires compliance with ICs. Compliance with ICs must be

assured by conducting long-term Site stewardship which involves implementing, maintaining and monitoring effective ICs. To that end, a Plan will be developed to ensure long-term stewardship which includes maintaining and monitoring effective ICs including mechanisms to ensure regular inspections of ICs and an annual certification to U.S. EPA that ICs are in place and effective.

V. Progress Since the Last Five-Year Review

This is the second Five-Year Review for the site. A protectiveness determination could not be made at the first Five-Year Review due to the continuing release of PCBs from on-site springs into Stout's Creek. The first Five-Year Review recommended the investigation of these releases to determine if additional remedial measures were required. Since the first Five-Year Review, CBS has completed a groundwater and sediment investigation, and U.S. EPA has completed both human health risk and ecological risk assessments. Based upon the results of the investigations and risk assessments, U.S. EPA determined that new operable units for groundwater and sediment were required. On September 26, 2006, U.S. EPA signed a ROD Amendment for operable units 2 and 3 to address the continuing release of PCBs from on-site springs into Stout's Creek. U.S. EPA is currently in negotiations with CBS and the other governmental parties on a global settlement for six sites, including Bennett's Dump.

Table 2: Actions Taken Since the Last Five-Year Review

Issues from Previous Review	Recommendations/ Follow-up Actions	Party Responsible	Action Taken and Outcome	Date of Action
PCBs released from springs on-site into Stout's Creek	Investigate site hydrology	CBS	Investigation Completed	9/1/2006
PCBs released from springs on-site into Stout's Creek	Modification of the Bennett's Dump ROD Amendment	U.S. EPA	ROD Amendment for OU 2 and OU 3	9/26/2006

VI. Five-Year Review Process

Administrative Components

The State of Indiana, City of Bloomington, Monroe County, and CBS Corporation have been notified that U.S. EPA is completing a second Five-Year Review. The U.S. EPA gave a Technical Assistance Grant (TAG) to the group Citizens Opposed to PCB Ash (COPA) and a Citizens Information Committee (CIC) has been formed to disseminate information regarding the Consent Decree sites and the PCB issues in Bloomington, Indiana. Public Meetings are held at least four times per year and the meetings are filmed for broadcast over the Bloomington cable access television.

Community Involvement

The U.S. EPA notified Michael Baker of COPA that a second Five-Year Review was going to be completed for the Bennett's Dump site. A public notice ad was also placed in the Bloomington Herald Times on July 30, 2007, stating that a second Five-Year Review was being conducted.

Document Review

The Administrative Record for the Bennett's Dump site was reviewed.

Data Review

No data was reviewed for this second Five-Year Review because the ROD Amendment for operable units 2 and 3 was signed on September 26, 2006. U.S. EPA is currently in negotiations with CBS Corporation, State of Indiana, City of Bloomington, and Monroe County for a global settlement to implement the remedy in the ROD Amendment.

Site Inspection

A number of site inspections have occurred and the latest occurred on August 7, 2007. U.S. EPA and the State of Indiana were present at the August inspection. No problems were discovered during the inspection and if a global settlement is reached with CBS Corporation, implementation of the passive quarry drains should begin shortly after entry of the Consent Decree.

VII. Technical Assessment

Question A: Is the remedy functioning as intended by the decision documents?

No. The remedial action for the source control operable unit has been implemented and has met the cleanup objectives for the site soils. The continuing release of PCBs from the springs into Stout's Creek required the development of two additional operable units for groundwater and sediment. A ROD Amendment to address operable units 2 and 3 was signed on September 26, 2006. If a settlement is reached between CBS and the other governmental parties, construction should begin shortly after entry of the Consent Decree. It is expected that installation of the passive quarry drain should begin in 2008.

Institutional controls for the Bennett's Dump site have not been finalized by the U.S. EPA because the final remedy for operable units 2 and 3 have not been implemented. The remedy is occurring in phases and based upon the results of the installation of the passive quarry drains, the institutional controls may change. Six months after completion of construction, the institutional controls will be implemented.

Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives used at the time of the remedy selection still valid?

Yes. No new standards or to be considered criteria have been developed since the ROD Amendments for the source control operable unit and groundwater and sediment operable units.

Changes in Exposure Pathways, Toxicity and Other Contaminant Characteristics

The North Park Development has affected the land use of the surrounding area. Both residential and industrial construction is underway surrounding the site. The North Park Development Group has not decided on what type of development would occur at the Bennett's Dump site and the property adjacent to the site. The site soils were remediated to industrial standards and depending on the results of the passive quarry drain, certain portions of the site may require fencing to prevent access.

The toxicity factors and contaminant characteristics have not changed in a way that could affect the protectiveness of the remedy. In addition, risk assessment methodologies have not changed in a way that could affect the protectiveness of the remedy.

Expected Progress Towards Meeting the Remedial Action Objectives

U.S. EPA expects that the Remedial Action Objectives will be met for the site with the implementation of the ROD Amendment for operable units two and three.

Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

No. No additional information has required U.S. EPA to change the remedy described in the 2006 ROD Amendment for groundwater and sediment.

Technical Assessment Summary

The investigation, including the development of human health and ecological risk assessments and the subsequent ROD Amendment signed on September 26, 2006, was used as the basis for responding to Questions A, B and C. The continuing release of PCBs will be addressed by implementing the ROD Amendment for the groundwater and sediment operable units.

VIII. Issues

Table 3: Issues

Issues	Affects Current Protectiveness (Y/N)	Affects Future Protectiveness (Y/N)
Continuing release of PCBs from the springs on-site into Stout's Creek	Yes – remedy for groundwater and sediment have not been implemented	Yes – remedy for groundwater and sediment have not been implemented
The required ICs have not been implemented. Implementing and maintaining ICs will be required to assure protectiveness of remedy	Yes	Yes

IX. Recommendations and Follow-up Actions

Table 4: Recommendations and Follow-up Actions

Issue	Recommendations Follow-up Actions	Party Responsible	Oversight Agency	Milestone Date	Affects Protectiveness	
					Current	Future
PCBs released from springs on-site into Stout's Creek	Implement ROD Amendment for groundwater and sediment	CBS	U.S. EPA	6/30/2009	Yes	Yes
The required ICs have not been implemented. Implementing and maintaining ICs will be required to assure protectiveness of remedy.	Submission of a workplan for the implementation of effective ICs (including documentation of IC evaluation activities and planning long-term Site stewardship to assure maintaining and monitoring effective ICs).	CBS	U.S. EPA	6/30/2009 (within 6 months of construction completion)	Yes	Yes

X. Protectiveness Statement(s)

The source control operable unit remedy remains protective, but since the remedies for the groundwater and sediment operable units have not been implemented, the remedy is not protective of human health and the environment. U.S. EPA expects the remedy to be protective once the operable units for groundwater and sediment are implemented and effective institutional controls are implemented, maintained and monitored.

XI. Next Review

The next five-year review for the Bennett's Dump site is required by August 2012, five years from the date of this review.

SOURCE: MODIFIED FROM U.S. GEOLOGICAL SURVEY 7.5-MINUTE SERIES MAP OF BLOOMINGTON, INDIANA, QUADRANGLE, 1966, PHOTOREVISED, 1990

BENNETT'S DUMP
BLOOMINGTON, INDIANA

FIGURE 1
SITE LOCATION MAP

TETRA TECH EM INC.

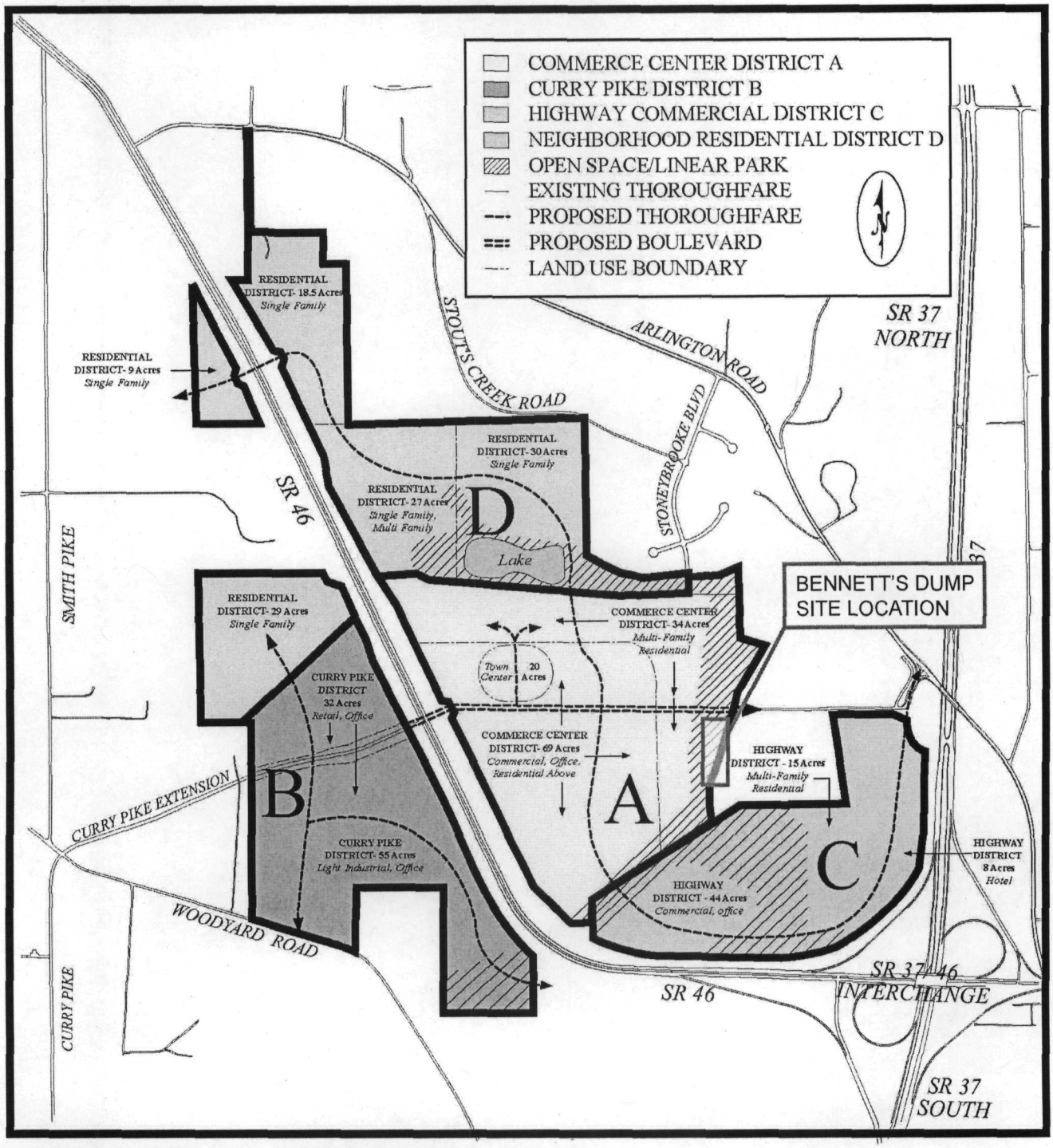

FIGURE 2: BENNETT'S DUMP GENERAL SITE LOCATION

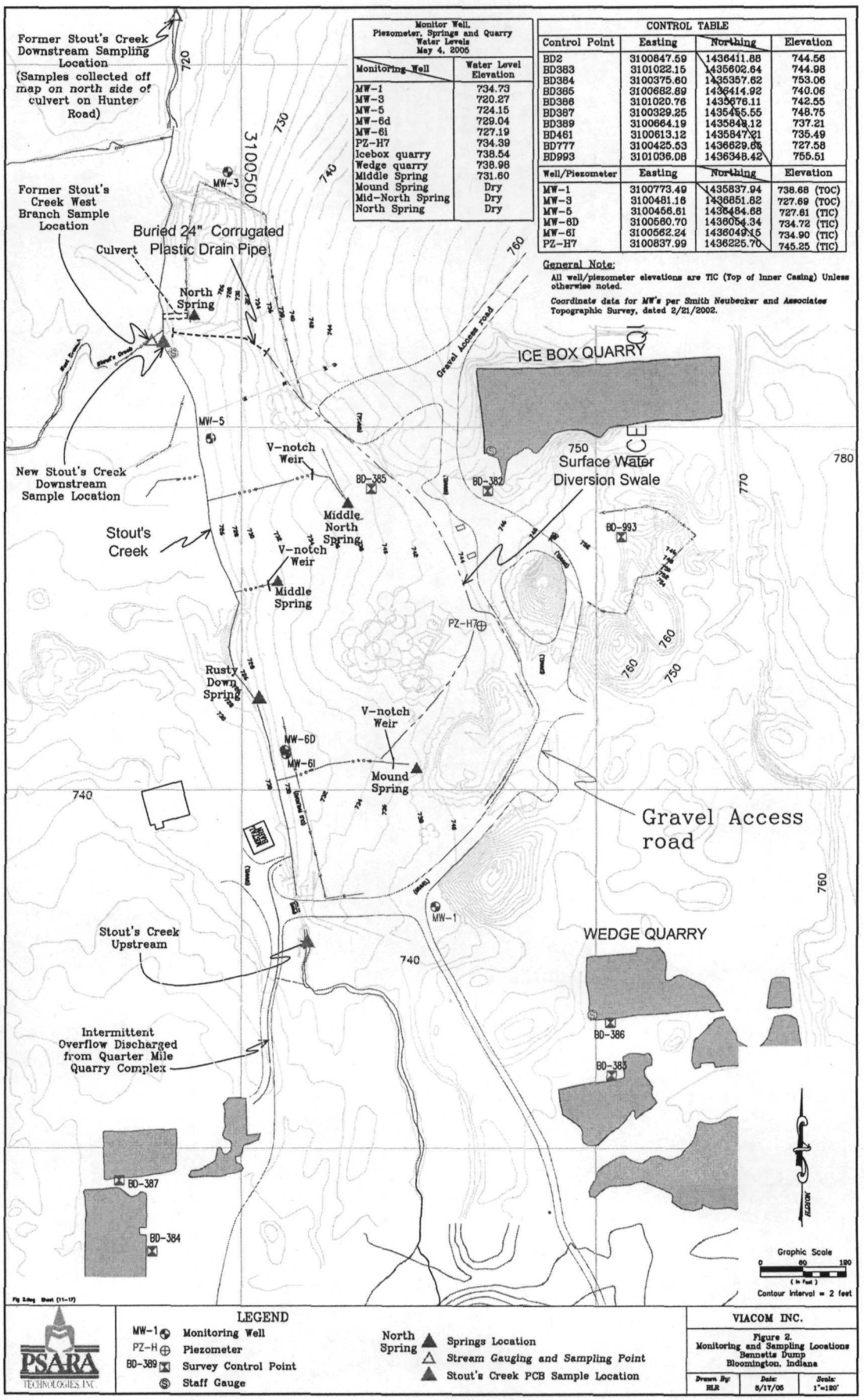

Figure 3. Locations of various springs and other site features